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SPOONBILLS AND STORKS IN HOLLAND.

BY REGINALD LODGE.

ON a recent visit to Holland, intent on photographing from the life some of the marsh and water birds, which at one time were so numerous in this country, until banished by drainage and over-population, I was fortunate enough to obtain an introduction to an eminent Dutch ornithologist, who was good enough to pilot me himself to one of the very few remaining breeding-places of the Spoonbill in Western Europe.

It was a novel experience, and one I shall never forget, to find myself at length, after sixteen hours' travelling, afloat in an immense meer, being propelled through narrow channels cut in the reeds, which towered over our heads, just wide enough for the passage of the punt. The reeds on both sides appeared full of Great Reed Warblers, their chattering song being almost continuous, though the birds were too skulking to be often seen, and in our progress, during which we saw occasional Purple Herons, Spoonbills, and Cormorants, we had constant opportunities of watching the graceful evolutions of the Black Terns, which skimmed in swallow-like flight over the reeds.

The Spoonbills, however, were the chief object of the expedition, and we did not tarry until we had reached the first small colony. The birds had, we learned, been disturbed and were somewhat scattered, apparently not more than seven or eight nests being together. At the time of our visit most of the nests contained nearly full-grown young ones, some of which at our

approach were old enough to leave the nest and scramble out of sight amid the dense forest of reeds. Only one nest did we see containing eggs, three in number, round and dirty white, splashed with faint rust-coloured spots.

The nests were large flat platforms of reeds trampled and bent down, and just raised above the surface of the water. The young were nearly feathered, and the short primary feathers were of a jetty blackness, contrasting with their white plumage. All the



YOUNG SPOONBILLS ON NEST.

(Photographed from life by R. B. Lodge, Enfield.)

time we remained near the spot the old birds were flying uneasily round and round, high up in the air, but without uttering a sound, looking very white in the glaring sunshine against the blue sky.

I was extremely anxious to obtain a photograph of some of the old birds; but the high wind was blowing the reeds about so violently, that I had great difficulty in photographing the nests and young, and in all probability any attempt to secure the parent birds would have resulted in failure even if I had waited for their return. This, however, as I was not alone, was out of the question. I have before now waited concealed at nests for seven hours to secure a photograph of the parent birds, and would willingly wait still longer to secure anything out of the common,

but I cannot expect other people to wait with me. However, I am in hopes of having an opportunity of spending three or four days next year by myself, at an earlier date, in this most interesting marsh.



NEST OF STORK WITH TWO YOUNG.

(Photographed from life by R. B. Lodge, Enfield.)

The Spoonbills, I am informed, had settled in the meer some years previously, on the draining of another large meer some miles away. Then an attempt had been made to drain this meer also, and the birds had been driven away for several seasons; but the attempt was not successful, the meer had reverted to its former condition, and the Spoonbills and other marsh birds had returned to their haunts, where I hope, in the interests of all ornithologists, they may long be permitted to remain.

Before leaving we found nests of Purple Herons and Common Herons, both containing young birds, and eggs of the Great Reed Warbler, and on reaching my host's house I seized the opportunity, almost in the dusk of the evening, of photographing a Stork's nest in his grounds, in case I did not get another chance. I was very glad afterwards that I did so, for I only saw one other nest during five days in Holland, and that was near the Hague, from the windows of the passing train. Both were built on the summit of tall poles fixed upright in the ground, on which a cartwheel had been fastened. I heard, however, of another a few miles distant, though I believe they are not so common as is generally supposed.

The one here figured contained two young nearly able to fly and one of the old birds, which is standing in the characteristic and traditional manner on one leg. While I was there I only saw one old bird, for as soon as one appeared the other went off for food. It was a fitting close to this my first day on Dutch soil, to watch the birds silhouetted against the evening sky as we sat out in the beautiful grounds after dinner, enjoying with the zest of novelty their quaint and contemplative postures, recalling the events of the past hours and planning a journey to a distant locality where the Avocets still breed, together with Ruffs, Godwits, Oystercatchers, and Sheldrakes.

A NATURALIST'S JOURNAL IN HOLLAND AND BELGIUM.

By O. V. APLIN, F.L.S.

WE arrived at the Hook of Holland early in the morning of Sept. 26th, 1895, and proceeded up the Maas to Rotterdam, where a few Black-headed, Herring, and Common Gulls were to be seen.

At Rotterdam we stayed until the 29th, making various excursions by river and canal to Delft, Dordrecht, Amblasserdam, &c.; but there was very little bird-life of interest to be seen. I only noted twenty species of birds, the most interesting being the Crested Lark (*Alauda cristata*), which I saw in some of the fields. This bird has been occasionally recorded as occurring in England, and some doubt has been occasionally expressed as to the identity of the species (*cf.* Zool. 1895, p. 451). I am inclined

to think that these doubtful cases should be consigned to oblivion. The Crested Lark is such a very distinct and well-marked bird that no one who knew both species well would have the slightest chance of confusing it with the Sky Lark, or of mistaking the one for the other. Again, no one who really saw a Crested Lark for the first time ought to have the least doubt that he had seen a bird new to him, or have any difficulty in convincing others, by his description of the bird, of its identity. Apart from its long drooping crest of quite a different shape and character to the Sky Lark's, the Crested Lark, in all its forms, is of a different colour to the Sky Lark; it is a broad-chested, massive bird, with a very big head, and (except in a pale southern form) a strong beak, a short tail (in which there is no white), and a shape altogether different. Its flight is different; it looks heavy on the wing, and has the appearance of having the bend of its wings higher than its body, which seems to hang between the wings curiously; this gives the bird a clumsy, awkward appearance, not lessened by its conspicuous head and beak. All this contrasts with the appearance of the elegantly-shaped Sky Lark. I am afraid I have not made my meaning very clear; it is difficult to do so; but I think that any one who knows the Crested Lark will follow me. Then, again, the Crested Lark is fond of uttering its call-note; it invariably does so upon alighting after a short flight, and this call-note is loud and quite peculiar. It is very sweet, and may be written "kay-see-sweet-weet," or "sweet-a-weet" in some cases. There were numbers of Peewits in the grass marshes or "polders," also Black-headed Gulls and some Herons. We used to have Teal for dinner. The Ring Dove and Stock Dove both frequented the little park at Rotterdam, together with various ordinary birds. White Wagtails I saw by the canals, sometimes on the moored timber-rafts—*e. g.* between Delft and Rotterdam. I noticed the Black Crow. At Dordrecht I saw a single Black Redstart (*Ruticilla titys*) about the Groote Kirke. There is a nice Diergaarde at Rotterdam, where they have a big open aviary for pinioned fowl, containing Night Herons, Storks, Spoonbills, Flamingoes, &c. Also another aviary with some good waders, *e. g.* Reeves, Spotted Crakes, and Cayenne Lapwings (*Vanellus cayennensis*). One night I could clearly hear the cries of these noisy birds from my room in the hotel, which was a considerable distance away, and was instantly carried back in imagination to

the rolling "campo" of Uruguay, where the call of the "Téru-Téru;" was a common sound at night.

Sept. 29th. To Amsterdam. Teal again for dinner, these little ducks being evidently numerous just then.

Sept. 30th. To Zandpoort, where there is a bit of legitimate Holland, so to put it: high ground like the sandy parts of Norfolk, with sand, fir-trees, and scrub-oak, and always dry land, before the Dutch poached on the sea. But we only saw Jays and a Green Woodpecker. From Zandpoort we walked to Haarlem, through pretty agricultural country and the village of Bloemendaal, noted for its villas and gardens, and just then remarkable for its glorious beds of Begonias; but we hardly saw a bird. We returned to Amsterdam by train.

October 1st. A voyage in a wherry to the island of Marken, in the Zuiderzee, yielded us nothing but the sight of Black-headed Gulls, Peewits, and Starlings; nor were we more lucky when visiting Monnikendam and Broek, the noted clean village; so turned our attention to the dairying industry and old silver. But when the summer migrants are here the reed-grown drains must be a grand place for river warblers, and the little fruit-gardens on the edge of the drains and canals are I dare say alive with the song of various interesting warblers. The moral we learnt was, not to go to Holland in autumn to see land-birds, unless indeed you go to look for migrants on the sea-coast. I may say here that we never saw a Stork; doubtless they had already gone south.

Oct. 2nd. I tried to study Natural History in the Ryks Museum. There was a curious old gilded chariot dating from the middle of the 18th century, with painted panels, one of which was instructive. It represented a fierce Hedgehog advancing open-mouthed on a nest of bird's eggs (perhaps Blackbird's) placed conveniently for him on the ground. I am afraid this was no libel. On other panels were painted old-fashioned Pheasants (the true *P. colchicus*), Shoveller ducks, &c. In pictures by Melchior d'Hondecoeter (1636-95) I noticed a Bittern, Shoveller, Red-breasted Goose (*Bernicla ruficollis*), Smew, &c. The two last-named figure in the famous picture called "La plume flottante," which includes also a crested Crane, perhaps the "Peacock" of the guide-books. Another picture by the same artist, "Oiseaux morts," represents a Partridge with the horseshoe irregular, and

much white round it. In a picture by Frans Snijders (1579-1657) there is a Partridge with some white on the edge of the horse-shoe.

Oct. 3rd. A journey by steamer in very bad weather up the North Holland Canal to Alkmaar showed us no birds, and there was clearly nothing to be done in this way, so we determined to leave for East Holland and Belgium the next day, after seeing the Zoological Gardens.

Oct. 4th. In the Diergaarde we found a nice bird-house, and noticed a specimen of that lovely little bird, *Poephila mirabilis*, Gould, which displays blue, crimson, green, yellow, amethyst and claret-colour in its plumage. Some local Jays had the crown of the head unusually white. I was much interested in listening to the bright little trill, "chit-teree-ee," of some Crested Tits. There were also some Bearded Tits (the Baardmees of the Dutch). We saw three Bisons (*Bison americanus*) and two examples of the Aurochs (*B. bonasus*). The Aurochs bought by the Zoological Society of London in 1868 was bred here in 1865. We went through the birds in the Museum in the grounds. The most noticeable things were *Locustella luscinioides*, from Kralingen; a series of twelve *Anthus rupestris*, one or two of which approached *A. spipoletta*, but most of them were not to be distinguished from *A. obscurus*; local Hawfinches, rather brighter than our resident birds; many Sand Grouse (of the 1888-9 invasion), and two downy young born in the Diergaarde on the 15th and 16th July, 1890. There was, as might be expected, a very fine series of Ruffs, and three examples of the Red-breasted Goose (*Bernicla ruficollis*), one from Rotterdam and another from North Holland. As mentioned above, the bird was known to the old Dutch painters. Some very beautifully executed life cases of birds (like those in the British Museum), with space not spared, have been fitted up. They include Purple Herons and nest (Naardermeer); Spoonbills (two nests), and Great Reed Warbler and nest—a very pretty case; Ruff and Reeve; Herons and Cormorants; Sheldrakes; and Sand Martins, with one burrow opened. We went, *viâ* Utrecht and Arnhem, to Nymegen.

Oct. 5th. Nymegen. Walked to Berg en Dal, at some little elevation, whence you get a very fine view over the flat rich country of the Lower Rhine, with its villages, farms, and trees, the winding river and undulating wooded country. I noticed

White Wagtails, Jays, Magpies, Rooks, a Green Woodpecker, a Sparrowhawk, and a little party of Tree Sparrows, with some of their domestic relations. But my best luck happened in a little open wood of Scotch firs on the slope of a sandy, heathery hill facing the sun. Here I saw and heard the Chiffchaff (but only a few notes), and fell in with a little party of White-headed Long-tailed Titmice (*Acredula caudata*). One or two had signs of a dark mark through the eye, the heads of the others were quite white. They are very striking birds, looking rather bigger than our race, and were nearly white underneath—altogether they strike one as larger and lighter coloured than *A. caudata rosea*. But their habits were similar and their notes too; and I watched them with great pleasure as they made their way in a straggling manner over the top of the hill and into a scrub of low Spanish chestnut saplings. Here, too, were three or four continental Coal Tits (*P. ater*), with blue-grey backs, a Tree Creeper, &c.

Oct. 6th. The weather being very bad, we made a rush by train into Prussia—to Cleve—and back; but the heavy rain-storms interfered with observation, and I saw only a White Wagtail, Black Crows, &c. I am pretty sure I heard the song of a Black Redstart from the roofs of some of the houses, but I could not see the bird. In the Kronenburg Park at Nymegen, prettily laid out below the old fortifications, they have a nice collection of wildfowl, including the Red-crested Pochard (*Fuligula rufina*).

Oct. 7th. We left for Liège. A little way beyond Venlo, in a sandy agricultural country, I saw some Crested Larks. At Liège there were many Song Thrushes in the shops, and two old Partridges with the horseshoe white save for a few brown spots. *La chasse aux Grives* had begun.

Oct. 8th. A bunch of about a score of Meadow Pipits (*becs-fins*), the ordinary light-breasted birds, and another of the same number of Tree Sparrows, were offered to the hostess this morning. We left for La Roche in the Ardennes. At Melreux we had to stop an hour until the steam-tram started. The whole place was rather like a farmyard, for the cow in the Ardennes village is a most important personage; the street was profusely adorned with manure-heaps and pools of black water, which suit the White Wagtail very well. At a little auberge they gave us quite a zoological *déjeuner*, comprising a small Pike from the Ourthe

(the best I ever tasted, with firm sweet flesh), Hare, and Partridge. Swallows and Martins were still in some numbers round the church of Hotton, the next village, but we saw little of them after this. Arrived at La Roche, some way up the valley of the Ourthe (about 650 or 700 ft. above the sea), we went for a walk up one of the half-dozen valleys meeting at this place. White Wagtails were pretty common, also Jays, and we saw the Green Woodpecker and a Buzzard.

Oct. 9th. Walked by the terraced road leading part of the way through the Bois de la Roche to Samrée (550 metres altitude). Soon after leaving La Roche we saw two Black Redstarts, not fully adult. After entering the wood we saw a lovely fresh Comma Butterfly (*Grapta c-album*). Marsh Tits were the commonest birds in the forest, and were abundant; the woods were chiefly beech, with some oak in places. These birds had rather more extensive black caps, and were perhaps a shade greyer on the back than the British form. A wandering party of birds comprised Marsh and Great Tits, Tree Creepers, and Nuthatches; we saw too Wrens, Jays, and Chaffinches. Passing out of the woods we came on some open rough grass-land and cultivated patches near the top of the hill, perhaps the highest in the neighbourhood; there were a few Yellow Buntings. Some rowan trees were covered with berries, and, like others we had seen, were hardly touched by birds as yet. But the Song Thrushes, which fatten on them,* were just arriving, and we saw a little party of them visit the trees to-day. Samrée was, at that time at all events, a vast midden, manure-heaps and pools of black water being freely scattered over the place. Accordingly the White Wagtail found the place much to its liking, flying up as we passed from the manure-heaps to settle, as they love to do there, on the grey slate-stone roofs. As we were eating strange fare in a little farmhouse, which was (so a sign-board said) also an auberge, I watched from the window a bird with the yellowish tinge, often seen in autumn in *M. Yarrellii*, very strongly developed. Never were there such people as these for living with their cows; they beat the North Dutch, Norwegian, and Swiss people in this, I think. The auberge smelt so much of cows that I strongly suspect they had got them in the back room. There

* In Brussels, *Grives* from the Ardennes are esteemed the best.

were some Meadow Pipits, Chaffinches, and a big flock of Sparrows about Samrée, the first-named on a bit of pasture-land. To my great surprise I found a fine old male Black Redstart, sitting on the rough projecting stones under the eaves of a little farmhouse, and singing his bright little clear song. The strain was a little shorter than that heard in the Alps in June, and was only delivered occasionally, as the bird sat sheltered from the cold wind; but it was a bright little song for all that, and quite characteristic. The autumn song of the Black Redstart was new to me, but, as will be seen, I afterwards found the birds singing daily down at La Roche. The interesting point to-day was finding an individual staying so late in the season in this elevated and exposed spot. We walked down by a path through the forest without seeing more birds, the birch-woods being as quiet as they usually are. There are wild Boars, Roe Deer, and a few Red Deer in these forests, but they are only to be found in the most out-of-the-way parts by experienced local chasseurs. One, if not two, Black Redstarts singing about the rocks near the château of La Roche when we got back.

Oct. 10th. Drove to Nisramont, steadily uphill through woods. Then walked through some rather open scrub and heather (where was a chasseur in pursuit of a hare, so much excited, as his dog was giving tongue, that he could hardly reply to our enquiry whether he had shot anything), and down to the Ourthe at La Hérou. There is a beautiful reach of clear rippling river here; on the opposite bank the rocks rise high, precipitous, and rugged, partly clothed with birch, scrub-oak, rowan, &c. A Buzzard was wheeling overhead, a Green Woodpecker flitted from tree to tree on the further bank, and we disturbed a party of Ring Ouzels at some rowans, one of which, perched sentinel-like on a bare branch, uttered its loud tac-tac-tac-tac, and they made off. Song Thrushes were pretty numerous. A little party of House Martins, the first we had seen since leaving those at Hotton behind, were, I believe, travellers. A few which we saw on arriving at La Roche in the late afternoon were perhaps the same individuals moving down the river valley. We saw no more of them.

Oct. 11th. Cold wind again. We walked along a sunny sheltered terraced road above the river towards Mobage, and saw, chiefly in and near some little gardens, about twenty Black

Redstarts, one a very fine adult male. They like to haunt the houses and manure-heaps, of which there were many then in the streets of La Roche. These heaps were a nuisance, because they were placed in the gutters, and in an ordinary way the gutters afford the smoothest and best walking to be found in these cobbled streets. The people were apparently cleaning out their cowhouses for the winter, and could be seen wheeling out the contents through their own houses! If, as I suspect, *Ruticilla titys* winters here, the manure-heaps are an important factor in making the place suitable for the purpose. I saw a White Wag-tail, presumably a bird of the year, with the yellow tinge and a grey crown and occiput (cf. Zool. 1890, p. 375, and 'Naturalist,' 1891, p. 349). We noticed also a Stonechat and a Buzzard. A man repairing the road had just turned out a large Salamander (*Salamandra maculosa*) in moving some earth. He said they were common, and he often unearthed five or six in a day. Other reptiles seen were a dead Blindworm and the remains of a Colubrine Snake. Pearl-bordered Fritillaries (*Argynnis euphrosyne*) were common at the roadside. We saw more Black Redstarts about the château. There were bunches of Song Thrushes in the shops, and at the hotel they gave us Grives to eat daily; they were wonderfully fat, and had been feeding on rowan-berries. This it was easy to ascertain, as the cook did not draw or clean the Grives, and when we cut one open we always had a few berries on our plates.

Oct. 12th. Dull and a little rain. Black Redstarts in song about the roofs, morning and afternoon. I noticed one particularly fine adult male. Watched a Dipper in the Ourthe with a dusky head, which undoubtedly had sooty under parts, *i. e.* no chestnut on the belly. In this respect it resembled *Cinclus aquaticus melanogaster*, which is said to occur in North Germany. La Roche is only a little north of lat. 50°, and only about 700 ft. above sea-level. But the country is drained by the Northern Meuse or Maas, of which the Ourthe is a tributary; unlike part of the Vosges (where *C. aquaticus albicollis* is said to occur), which are drained by the Southern Saône and Rhone. This individual was sitting on a bit of drift at the edge of the river, and was singing. The song was a sweet bright warbling, rather rapid, with some shrill squeaking notes and some very Skylark-like; my wife noticed this independently. After singing for a

little while the Dipper began to feed. The Ourthe just there is a shallow crystal-clear river, with not more than a foot of water over a brown stony bottom. The bird often plunged into the water to swim and to wade over the big stones, and sometimes went under the surface with a splashing rush. Once or twice it turned up its tail-end almost like a duck, and more than once it took a header from a stone. As far as I could see, it was a considerable exertion to get under the water, and the bird remained not more than fifteen seconds under water on any occasion. In the afternoon we went by way of the little elevated village of Cielle—where I noticed Tree Sparrow and White Wagtail—to Jupelle, and came back up the very beautiful river valley. Saw some Golden-crested Wrens in a spruce-wood, and Linnets and Magpies by the way. Marsh Tits were everywhere by far the most numerous of the genus. A great and noisy concourse of Carrion Crows were wheeling about over a wood at the top of a ridge; there were about fifty of them. The Crow family was well represented in the Ardennes. Jays were naturally abundant in the woods, but I do not remember seeing any Rooks. The Roman Snail (*Helix pomatia*) is found at La Roche.

Oct. 13th. Milder. A Black Redstart was hawking flies from its perch on the roof a tiny chapel on the hillside; it sang a little. Its call-note was a faint soft "sit," repeated often. In the Bois we saw a Spotted Woodpecker (*D. major*) hammering an oldish oak-tree. On a sunny slope there were a few butterflies, including a "Camberwell Beauty" (*Vanessa antiopa*). Late in the afternoon we walked along the road through the Bois, in the hopes of hearing the Little Owl, which occurs here (and, south of the Mediterranean at all events, is very noisy about sunset), but without success; so I expect they must be rare. Lovely golden tints were coming on the beeches, which were very fine, many of them having smooth silvery bark. This variety is known to English timber-merchants as "yellow beech"; the timber is said to be very good, and much superior to that of the ordinary or "white beech." The production of the yellow variety seems to be chiefly a question of soil in England. One little park in North Oxon is noted for it. The effect of the different trees massed, and seen at different distances on the shoulders of the hills, varying in colour from yellowish green to purple, was extremely fine. I saw the following stuffed birds in La Roche:

—At a furniture dealer's, a Kite (*Milvus ictinus*), Goshawk (*Astur palumbarius*), Grey Shrike, Song Thrush, Fieldfare, and Coot; at a café, two Little Owls (*Athene noctua*); at the chemist's, a Grey Shrike and a Magpie. There may be bought in La Roche heads of the Red Deer and Roe Deer; of the latter, we got a nice head with antlers measuring ten inches and a quarter along the outside of the curve. Also you can get local skins of the Fox (with dark and thick fur, and remarkably large brushes) and Wild Cat. The facts of the Black Redstart being found here in some numbers in mid-October, and that it was singing at that season, were very interesting. I am inclined to think that these individuals intended to pass the winter in that little sheltered valley, where they had the advantage of houses and plenty of middens, for almost, if not quite, all the summer visitors among the migratory birds had moved southward by that date. The facts suggested interesting speculations. For instance, the questions whether the Black Redstart habitually sings in its winter quarters; and, if so, does *R. phœnicura* sing also? I have only seen two or three Black Redstarts in their southern winter quarters south of the Mediterranean, but they were not singing. Mr. Howard Saunders kindly tells me that in Spain he has heard the Black Redstart singing early in November, but that he has never been in Spain in October. If the Black Redstart sings habitually in autumn and winter, the fact is additional evidence of the relationship between this bird and the Robin, and I may add that I have occasionally heard a shrill strain from a Robin which reminded me strongly of the song of the Black Redstart. With regard to the white eggs of the Black Redstart, it may be worth recording that I once found a white Robin's egg, the only egg in the nest. Of course this was only an abnormal variety (the shape was normal), but it tends to show the direction abnormal variation may take in this group of birds, and other white Robins' eggs have been found. In the case of the plumage of birds, it is often quite possible to name the colour and character which variation will assume in an abnormal variety of a particular species of bird. The present point is, however, not worth much, for a colourless egg may occur to any bird. The connection between the olive-brown Nightingale's egg and the blue-green Redstart's egg is evidently close, for Partridges sometimes lay abnormal blue eggs; I had one some years ago, and I believe blue varieties of Pheasants' eggs also occur.

Oct. 14th. To Brussels. Near Namur I saw what I am pretty sure was a Great Grey Shrike. I only saw it for a moment, but it could have been nothing else. Many tourists on this railway have probably noticed the extreme beauty of the Forest of Soignes. The huge beeches, with tall towering trunks, are a glorious sight.

Oct. 15th. At Brussels. In the Marché de la Madeleine we found Meadow Pipits, Ortolans, Chaffinches, Greenfinches, Linnets, Tree Sparrows, Song Thrushes, and a few Blackbirds, Quails, and Partridges, with both white and speckled horseshoes. The shop-windows, too, were full of Grives. There is an extensive collection of birds in the Musée d'Histoire Naturelle, but so crowded and badly arranged that I had not time to examine them carefully. Ring Doves inhabit the little park here.

Oct. 16th. In the Palais des Beaux-Arts a picture by M. d'Hondecoeter included a Kingfisher coloured a black-blue, as are (with one exception) all those by the old Dutch and Flemish painters that I have seen.

Oct. 17th. Arrived at Antwerp, and went at once to the Zoological Gardens, where we saw three specimens of the Abyssinian Ass (*Equus tæniopus*), three Burchell's Zebras (*E. burchellii*), and two true Zebras (*E. zebra*), two Giraffes (four females have been born here, 1871-76), a grand Bison, and a fine Aurochs. Also a blackish variety of *Felis pardus* from Java, with the spots showing indistinctly, and some Barbary Lion cubs with spotted legs. I noticed here, and at Amsterdam, that Armadillos repose quietly on their backs, with legs and nose in the air and tail sticking out. Other things worth notice were a pair of local white Jackdaws with ordinary eyes (we saw two more at Amsterdam); eight species of Toucans, including *bicornis*; *Copsychus macrurus*, which sang sweetly; and *Prosthemadera novæ-zeelandiæ*, with white chest-tufts. There was a magnificent aviary of Rails, Ibises, Gallinules, Gulls, Waders, &c., and I was a good deal surprised to see some of the Waders still in summer dress; for instance, a Black-tailed Godwit, and a Ruff, whose (blackish) ruff was ragged, but nearly all there. The Antelope-house is a very fine one. It is horseshoe-shaped, with a large covered yard inside the curve communicating with each box, thus enabling all the animals to have exercise in turn.

Oct. 18th. In the Musée Plantin-Moretus there is a set of six

eaux-fortes, by Pierre Boel, of Hawk scenes. One represents two Falcons striking a Heron, which is almost on its back in the air. In another, which includes Ducks, a Merganser, a Heron, and two Bitterns, one of the last-named has its neck stretched upwards and its bill in the air; the other is crouched on the ground, with half its neck and its bill straight up; all the birds are apparently alarmed by a Hawk, which is not shown. Among various pictures of hunting scenes, dead game, &c., in the Musée (Palais des Beaux-Arts), I noticed especially one by P. Gysels (who lived between 1621-90). This wonderful production included, *inter alia*, representations of a Heron, Mute Swan, Bittern, Partridge (with chestnut horseshoe), Green Woodpecker, Roller, Kingfisher (of the usual black-blue), Spotted Woodpecker, and Jay. As a whole the birds were wonderfully well done, especially the two last-named. There is a fine picture also, by J. Fyt, of two Eagles on a crag, one holding a Mallard. The only well-coloured Kingfisher I saw in any of the galleries we visited was here, by J. Weenix (1644-1719). A few Black-headed Gulls were seen along the quay.

Oct. 19th. To Ghent, where for the first time I noticed Redwings among the Song Thrushes in the shops.

Oct. 20th. Bruges. Redwings in the shops here too.

Oct. 21st. Crossed from Ostend to Dover. A few Grey Crows were to be seen at Ostend and a little way inland. The sea was calm, and there was hardly any wind. Soon after starting we fell in with many Black Scoters (*Edemia nigra*), some Black-headed and Common Gulls, and a few Gannets. When we had been about an hour at sea a Robin came on board, settling on the deck close to our chairs, and two or three more passed over, going towards the continental coast. In mid-Channel we saw only Gannets—about a score, and all adults—and a few Gulls. But several flocks of small birds were going in our direction. I identified Chaffinches and Tree Sparrows; two or three of the latter (clean, bright-looking birds) came on board, and others followed in our wake and under our lee, a slight breeze only blowing from about S.W. Chaffinches are stronger and faster fliers, and could beat us easily, albeit we were on a good boat—the 'Rapide.'

SOME OBSERVATIONS ON THE NOTE OF THE CUCKOO.

BY A. HOLTE MACPHERSON, B.C.L., M.A., F.Z.S.

DURING the spring and early summer of the present year I took every available opportunity of listening to the Cuckoo. Many friends kindly rendered me their assistance, the result being that I obtained a mass of observations relating chiefly to the pitch of the bird's voice, and to the interval which separates the two notes of its familiar call.

The Cuckoo has been the subject of so much discussion that it is with some hesitation that I record the following observations. No bird has had its natural history more thoroughly criticised, and no bird still remains so great a mystery.*

In this paper my remarks are confined to certain characteristics of the well-known call, and I shall say nothing of the other sounds which the Cuckoo utters. Nor do I intend to attack the generally accepted view that the cry "Cuckoo" is confined to the male bird, beyond saying that I have evidence (although it does not amount to proof) that the female is occasionally responsible for this cry.

On analysis, my records as to the interval between the two notes do not show much that is new.† They show that when the bird is in full song, shortly after its arrival in England, the interval is usually greater than the minor third, which it is popularly supposed to sing, and is to all intents and purposes a full major third. On an average the notes may be considered to be approximately E and C, but of this more will be said hereafter. The notes recorded have in all cases been determined by a tuning-fork, pitch-pipe, or piano; but in striking an average, allowance has to be made for the difficulty in always ascertaining whether the calls recorded were uttered by one or more birds, for a Cuckoo will often stay for days in a comparatively small area, frequently flying across from one side of it to the other. To

* Geddes and Thomson's 'Evolution of Sex' (pp. 274-279) contains an excellent criticism of the mysteries of the natural history of the Cuckoo.

† There are some interesting remarks on the voice of the Cuckoo in Gilbert White's tenth Letter to the Hon. Daines Barrington; see also Witchell's 'Evolution of Bird Song' and Harting's 'Ornithology of Shakespeare' for further notes on the subject.

an observer this bird certainly seems to be merely a "wandering voice."

Considerable variations in the interval were recorded, and at all times throughout the season. It is, however, quite clear that on the whole the interval tends to increase with the progress of time, and that about the middle of June the voice cracks. Personally, I have never heard a greater interval than a fifth. Mr. Witchell, however, whose researches in the songs of birds are well known, informs me that on the 10th June last he heard a Cuckoo "in the interval of a sixth," but he adds that he "never before heard a Cuckoo sing any interval beyond a major fifth."

Not infrequently the bird utters three notes. At Haileybury, on June 7th, Mr. F. W. Headley and I heard one sing E flat, D, C, two or three times, then it omitted the middle note, singing a minor third. These three notes were beautifully full and clear, and as perfectly in tune as if the bird's voice had been relegated to the few notes of our scale, whereas the intervals very rarely correspond exactly with those which we have become accustomed to recognise. A friend, writing from Hampshire on June 15th, says, "As I write one is singing F, F, C," and another sang F, D flat, C.

Some of the feathered species, when engaged in the performance of their love songs or antics, are oblivious of everything else; on such occasions certain game-birds are quite deaf; but the Cuckoo always seems to take an intelligent interest in neighbouring sounds. On June 6th I heard two birds at the same time. The first commenced singing E and C; the second sang F and C sharp, but, apparently horrified by the discordant result of his efforts, he at once altered the notes to E and C, and sang in unison with his rival. It was obvious that the change was purposely effected. Another bird was reported to me who was "evidently much put out by the crowing of a cock, for it sang its E, and then waited till the cock had finished crowing before singing its C sharp."

Now with regard to the pitch. This, like the interval, is subject to variation, but only within certain fairly narrow limits. Out of hundreds of recorded calls during the period when the bird was in good voice, the upper note in nineteen cases out of twenty is from F to E flat (both inclusive), and the lower note from D to B. And this brings me to a most curious point

which has caused me much perplexity. Although early in my investigations I found that my correspondents were practically at one with regard to the names of the notes which they heard, yet I found that when they wrote down the notes in musical notation they were divided into two camps. One half placed the notes exactly an octave higher than the other half; and whereas I had always written down the average call as E on the bottom line of the treble stave and the C next below it, by far the larger half of my correspondents considered it to be E in the top space of the treble stave and the C next below it. When, as happened in one case, two fairly musical people on hearing the same bird differed in their estimate to the extent of a whole octave, it was clear that there was something peculiar about the sound. Not caring to trust any longer to my own ears, which I believe to be fairly accurate for ordinary purposes, I enlisted the services of many of the most carefully trained musical ears of my acquaintance, and asked the owners to let me know the pitch and interval of every Cuckoo's call which they heard. My enquiries elicited a large number of careful observations, for which I am most grateful. One lady, a most accomplished violinist, compared notes with her friends, and at once experienced the same divergence of opinion. "I cannot tell why it is," she wrote, "but the pitch seems to bother so many people. I have asked several, and they all say the pitch is an octave higher than it is."

The result of these further enquiries was to dispel any doubts that had arisen in my mind as to the average call being the E and C in the middle of the piano. Those who assigned this position to the notes were in a considerable minority, but the weight of evidence is enormously in their favour.* But the question remains, why should there be any difference of opinion as to the pitch? I suspect that it is a question of harmonics. Having no knowledge of acoustics, I can only suggest this as the explanation, and leave those wiser than myself to test the accuracy of the suggestion.

It is a well-known fact that very few musical sounds consist of one simple note; they are composed of an assemblage of tones. These tones "are always members of a regular series, forming

* I once commenced a list of the notes assigned to the Cuckoo in musical compositions, but soon came to the conclusion that no significance could be attached to composers' views on the matter.

with each other fixed intervals."* A well-trained ear will divide a musical sound into its component notes without difficulty, while to the ordinary ear a single tone will alone be audible. It is to these additional notes—these "overtones" or "harmonics"—that differences in the quality of sounds are due. Now to my ear the notes of a Cuckoo have few equals in quality; they give me as much pleasure as the finest notes of the Blackcap or Marsh Warbler, and I think as much as a well-played violin or the middle notes of a good French horn. When the Cuckoo is at its best both notes are deliciously full and "creamy," but this is especially the case with the second or lower one. It is a curious fact that if you watch a Cuckoo when uttering its call, it is evident that all the labour is bestowed on the production of the first note, which is jerked out with considerable effort, while the second one seems to be produced without the slightest exertion. Yet the sound of the second note carries a long way the further; you can easily hear it at a distance at which the upper note is quite inaudible.

The notes of the Cuckoo are probably remarkably rich in overtones. It is an ascertained fact that simple notes without overtones are "soft, dull, and monotonous, and entirely devoid of shrillness or brilliancy; and it is a curious characteristic of them that they often give the impression of being lower in pitch than they really are. On the other hand, the addition of overtones gives life, richness, brilliancy, and variety to the sounds, and raises the impression of pitch."† Throughout this last spring, whenever I was able to get into the country, I carried a tuning-fork, and never ceased to be struck by the miserable tone of the fork when compared with the voice of the bird. The "timbre" of a tuning-fork, after the preliminary discordant "buzz," is very thin and uninteresting. "As compared with a pianoforte note of the same pitch, the fork-tone is wanting in richness and vivacity, and produces an impression of greater depth, so that one is at first inclined to think that the fork employed must be an octave too low."‡

This last quotation indicates my belief as to the cause of deception. Whether the pitch of the Cuckoo's voice is tested

* 'Sound and Music,' by Sedley Taylor, 3rd ed. p. 87.

† 'Philosophy of Music,' by W. Pole, F.R.S. (1879), p. 45.

‡ 'Sound and Music,' p. 101.

with a tuning-fork, pitch-pipe, or piano, you will find that the majority of people are apt to be deceived, because the bird's voice is so rich in overtones that it gives an erroneous impression of pitch. This view may not be well founded, but I put it forward for what it may be worth. Perhaps some of your readers can throw further light on the subject.

NOTES ON CANADIAN ORNITHOLOGY.

BY CHARLES A. WITCHELL.

ON arriving at Montreal, on May 19th, 1895, I was surprised to find the development of summer foliage less forward than that of Liverpool ten days earlier. The general temperature was also much colder. Near the docks were a few small birds closely like the Sand Martin, *Cotile riparia*, but their voices differed from those of any Hirundines which I had heard. The House Sparrow was introduced here some fifteen years ago, and now it is abundant in all but the busiest streets.

The city contains 300,000 people, and perhaps twice that number of Sparrows. Here, as in Britain, this bird builds a domed nest in creepers against the houses, if a better site for nidification is not available; but I saw no nests on the high trees. It has not the warm shelter of the ivy, which will not live in that climate. The severity of the winter is indicated by the fact that, at the date mentioned, there were in Montreal 3000 corpses awaiting burial. During the cold months no interment can take place, the ground is frozen so hard, and cremation has not yet become fashionable. The Sparrows are said to have driven the American Robin, *Turdus migratorius*, which is as large as an English Thrush, and the Blue-bird from the city; and a friend told me that he had recently seen a Sparrow drive a Robin away from food. It is perhaps noteworthy that the Sparrows of Montreal utter the same notes and for the same occasions as those of Britain, and that in both countries the males "mob" around a female in the same noisy manner.

The most pleasing incident of bird-life visible between the eastern and western coasts of Canada was the soaring and swooping of the Nightjar. The common species is much larger than that

of Europe, is very common, and its power of wing marvellous. Rising almost vertically, by spurts of a hundred feet or more at a time, the bird would seem to climb to a considerable altitude, and then, in the well-known manner of its race, dive headlong, and so swiftly that its rushing could be plainly heard, especially just previously to the sudden turn which concluded the descent, when the sound "whong" was produced so loudly as to be audible when the bird was distant halfway to the vanishing point. The frequent cry of the bird, "pee-opp," can also be heard at a great distance. The Nightjars were abroad from four o'clock till late in the evening, flying extravagantly all that time. Probably no falcon could do as much.

One species which the Sparrows have not displaced from the tree-lined streets is the Yellow Warbler, *Dendroæca æstiva*, which was very abundant, flitting about in the manner of our Willow Warbler, from which species the female could not easily be distinguished. The male has much brighter tints: his breast is of an intense deep yellow, which colour seems to glow through the olive-green of his back; his eye-streak is conspicuous. On his breast are some longitudinal striations, of a faint brown, half indistinct, as though they represented a constitutional trait developed by the great heat of the Canadian summer. A male flitted about for some minutes within two yards of my head. Its nest is placed high in the trees. The call-note of the species is a short unmodulated chirp, like that of the young Willow Warbler. The song consists of four or five notes very rapidly uttered, and closely like the first four or five in the song of the Willow Warbler. Sometimes a note or two would be added, and these were always delivered slower than the others, and were much more like the ordinary whistled notes of the Willow Warbler. I heard this curious variation in Vancouver (B. C.) as well as in Montreal. The insect food of the species seemed to be of a kind smaller than that of the Sparrows, which, however, often took large insects on the wing, as they do in England.

I heard a small greenish bird, apparently a warbler, singing in the tree-tops a song exactly like the sibilous strain of the Wood Warbler.

On May 27th I arrived at Ottawa. A few Chimney Swallows, *Hirundo pelagica*, apparently a family party, were flying over my hotel. This species has much of the general appearance of

Cypselus apus, but, in flight, seems to have no tail. The birds sometimes chased each other a little, and their call-note was frequently uttered. This is a very short "see," not unlike the short notes sometimes uttered by the British bird when others near are uttering their long "swee-ree." Towards sundown a large number of Chimney Swallows were flying near the Houses of Parliament, which are magnificent piles, in a commanding position. Wilson described the evening assembling or "mobbing" of this species (*vide* Am. Or. 1812, vol. v.). At sunset the air near one of the buildings became crowded with these birds. They arrived in clusters of from one hundred to four hundred, or thereabouts, flying high, and every minute or two a fresh flock came into view. The general mass extended for some two hundred yards in every direction laterally, and slowly whirled round. All the birds seemed to be chirping, and their combined voices produced a vast rustling sound.

I repeatedly tried to gauge the numbers of this flock, but always concluded that at least five thousand birds were in the air at the same time. A bystander informed me that all of these would sleep in a certain chimney, which he indicated. I saw none of them alight on any of the buildings, but a dense crowd—a current—of them was perpetually breaking against the gratings towards the summit of a tower-like chimney. The birds, as they approached the openings, were so dense as to occupy more than half of the field of vision there, and since only a small proportion could enter at the same time the majority darted aside from the wall, or, obstructed by others, fell heavily for a few yards, and then, recovering momentum, rose in another current of birds to rejoin the main concourse. But birds entered so fast and so confusedly that I could not count them. Towards dusk the crowd had been greatly diminished. I waited until the last bird had entered the chimney before I left the scene. I was credibly informed that the whole interior surface of the chimney is covered with the nests of the birds. I should have sought an inspection of the premises had not the Parliament then been sitting in an earnest debate. During the brighter hours of daylight not more than a dozen of these birds could be seen; and four days later, when travelling westward, I saw not more than an average of two per hundred miles, though I was carefully watching for them.

At Ottawa the Goatsuckers were prevalent, as they were at

Vancouver. On the prairie we heard the clear "pill-willet" of the Plover of that name. There we also saw those piles of milk-white bones, and the frequent deep paths across the deserted land, which are the last evidences of the wild Buffalo in that region. At Vancouver water-birds are abundant, including the Heron and the Osprey. Both of the last can be watched feeding from the city bridges. I saw an Osprey carry a fish to the summit of a dead tree some two hundred feet high, but a half-dozen Crows were in pursuit, and gave the bird no rest. One of them would sometimes hover close above the Osprey, but none dared to come within reach of the larger bird; and when it spread its wings, ruffled its feathers, and uttered its whimpering cry, they retired to a more respectful distance; finally, they left the spot.

One day a White-headed Sea Eagle, *Haliaeetus leucocephalus*, flew from the giant trees in the park, and sped across a wide valley. The small red Sparrowhawk, *Falco sparverius*, sometimes entered the city, and then the Purple Martins, *Progne subis*, attacked it with admirable courage and skill. Two or three of them would successively stoop at it, like little falcons, "hammer and tongs," until the objectionable stranger had departed. The Crows at Vancouver city are numerous, quite tame, loquacious, and imitative. They are never molested, except by the Purple Martin and the Barn Swallow. When two Crows began to peer about the ledges of a house, near a Swallow's nest, the two little birds attacked the invaders with delightful gallantry, and, marvellous as it may seem to relate, I saw one upset a crow from its perch on a spout whence it was leaning forward inquisitively. I also saw a Purple Martin repeatedly swooping at a Crow in a hollow between two houses. Directly the large bird rose from the ground the little one darted at him and made such an attack that the other was glad to get away. Late in the evening the large Northern Black-cloud Swift, *Nephæcetes borealis*, was speeding about; but I saw nowhere in Canada any behaviour comparable to that of *C. apus* when sometimes at nightfall it seems to retire into the sky.

The American Robin is common at Vancouver city. Its song is delivered like that of the Missel Thrush, *Turdus viscivorus*; but whereas the latter bird often utters four or five or more full tones in one strain, the former has generally only two and sometimes three. Its song is really pitiful, the more so as it is repeated

from an elevated position, and with a persistence worthy of a less barbarous utterance. The song-birds of that district are few and timid, and their notes are not varied individually. One strain was so frequent that nearly every Canary in the city had "caught" it. The notes of the Marsh Tit are repeated almost exactly by a closely allied bird, the Black-capped Chicadee, *Parus atricapillus*.

NOTES ON BIRDS IN KENT.

BY BOYD ALEXANDER.

THE congregating movement prior to migration is not the least interesting feature in bird-life. Swallows and Martins make an alliance, and they may be seen all day long winging their mazy courses to and fro over the cut corn-fields, and so deep at times do the Swallows pitch their flight that they well-nigh brush the shaggy corn-stalks with their breasts. The Swifts also fly in batches, circling round high trees and towers alike. The shrill sound of the ceaseless screaming of their voices fitfully strikes the ear as these weird-looking birds with their curved wings, sharply quivering, cut through the air, and swinging round the trees with such fine tact and precision that they hardly as much as tickle or scrape the leaves' smooth surface.

Linnets resort in large flocks to the fallow-fields, especially where charlock grows. The proverb which says that "safety lies in numbers" might well be reversed in the case of this bird. As soon as flocking takes place, the Linnets assume once more their shy habits, and carefully avoid our habitations, a trait also noticeable in other species of a similar timid nature. The delicate vermilion that smears the breast of the male Linnet is not attained till the second year. In immature birds a light chocolate colour takes the place of this.

Families of Red-backed Shrikes are abroad. Stout hedgerows, whose outgrowing branches serve as perches, or the sunny portions of a wooden fence, are at this time favourite resorts. They flit in close company from bough to bough in front of an intruder, the male parent bird uttering frequently his brisk "chuck." Mimicry is also resorted to, the movements of the Spotted Flycatcher being then very closely imitated, and except for his red-brown mantle and inordinately long tail he might at

first sight pass easily as that bird. When on a fence this Shrike will often turn backwards round its perch, and cling to the bottom of it, after the manner of a Titmouse. Several nests of this species may frequently be found in close proximity to one another. A "tiller,"* or some other favourable position, not far from the nest, is always chosen as a look-out post, and this is resorted to for some time before building is commenced. Incubation is performed by the female, who leaves her nest and flies to the "tiller," and is there fed by the male.

Around our gardens a few families of Spotted Flycatchers are still to be met with. These are the late broods. Although the majority of the young can look after themselves, yet in each family there are one or two wearing the spotted livery of first youth that have still to depend upon a mother's care. The task of feeding these devolve solely upon the female parent. Her mate has tired of her love-play, for as soon as the nestlings are abroad he leaves her, and becomes once more a bachelor. When catching prey for this backward brood she faces the prevalent breeze, and this enables her to detect more readily its drifting course.

The first appearance of the Wood Warbler in the Cranbrook district this year is a noteworthy incident. The favoured localities are certain spots in the Angley and Bedgebury woods, where tall firs and beech trees grow. From these high points this daintiest and prettiest of our Warblers proclaimed his arrival on one sunny day near the end of April by the utterance of his peculiarly fascinating song—a tiny "hip hip hip hurra." The first three syllables are given out with distinct hesitation, a mere prelude wherein to gain strength for the final outburst of song. This finale, which rises in pitch towards the end, and uttered with wings shivering and head thrown back, has all the appearance of being the expression of a deep passion of joy. Then, as if weary with such a supreme effort, it sluggishly flops to a fresh perch, and there gathers strength for another demonstration of its musical capacities. The male of this species arrives here before the female. And as soon as his songs have attracted and won a mate, they become less frequent, and cease altogether when the young are hatched.

* A local name given to a young oak-tree.

On May 15th a Golden Oriole (female) was shot in an orchard close to High Halden. A few weeks later (June 9th) a male was observed near Sissinghurst (about eight miles from the former place). On the day after its arrival rain fell heavily, and the bird was lost sight of, taking refuge no doubt in the thick fir portions of the Hemsted Woods. Prior to the above records another male bird appeared during May, 1893, in the same wood. The "Loriot" call, whence in France this bird derives its name, attracted the keeper's attention, and thinking his boy, engaged in arranging Pheasant-coops in a wood below his cottage, was whistling for help, he started out in the direction of the sound. This eventually led to the discovery of the bird, and also to its destruction.

The severe drought has at length abated; while it lasted things looked distressed. The dark foliage of copse and hedge-row stood out in bold relief against the brown of the parched-up pasture-lands, cropped close—and in places to the very roots—by grazing sheep and cattle. The conies even suffered. Of this many of the tender stems of the ash "tots" in the woods bear witness, for they are ribbed and marred by their teeth. The familiar sight of numbers of Rabbits feeding in broad daylight throughout the summer became eventually a rare one. Only scattered individuals were to be seen. The majority kept to their holes till dusk, realising that greater precaution was necessary, since they had to go further afield before food could be obtained. In bird-life the scarcity of food became also felt. It was quite a painful sight to witness Thrushes and Blackbirds on the parched-up fields, engaged in their spasmodic ramblings after worms which they could not get.

Premature migrations became general with Missel and Song Thrushes, and also with Blackbirds, when the currants and raspberries in our gardens no longer afforded them subsistence. These fruit-bushes were also attacked at times by flocks of Starlings, an uncommon trait in the good character of this species.

Compared with former years, the Nuthatches bred this season very sparingly. On the other hand, in the Tunbridge Wells district, a wonderful increase took place in their numbers. After the autumn moult the plumage of the male Nuthatch is remarkably handsome, the breast being a most delicate apricot, while the slate-blue of the upper parts is very intense in colouring.

Just now these birds are extremely restless ; most of their time is taken up in putting by a winter store of food, and this especially consists of hazel-nuts, which are plentiful this year.

The Sparrowhawk is still numerous. The thick portions of the Bedgebury and Hemsted woods often defy the keepers' search, and consequently not a few broods reared in these localities escape at least premature destruction. In this neighbourhood the nest is invariably placed at the base of two forked branches which jut out of the main stem of a fir or larch tree, and from 25-30 ft. from the ground. The front of the nest always faces the warmer side, while the back is usually protected by the main stem of the tree. During winter the old nest is resorted to as a roosting-place. In this way they often fall victims to the trap placed on the nest by the keepers. By the time the breeding season comes round again the winter storms have reduced the nest to a mere ragged bundle of sticks. On this foundation the new nest is occasionally built, although the general custom of this species is to build an entirely new one. Many authorities have stated that a deserted Crow's nest or Wood Pigeon's is made use of. I have never found it to be the case in this neighbourhood.

The Green Woodpecker, that bird who mocks with its bright laughter the treacherous coming of Spring, finds it difficult to rear a brood here, and consequently it is yearly decreasing as a breeding species. I attribute this fact to the great increase of the Starling. The big plagues of the small oak-green caterpillar and other arboreal insects, experienced the last two seasons, have caused large numbers of Starlings to breed in the woods, and these birds are not slow to take advantage of the old homes of the Woodpeckers. More than this, they engage in pitched battles with them over their newly-made holes. It is not unusual to find the Green Woodpecker resorting to the same nest-site of the previous year. In this instance the old hole is deepened. The drilling of a new one is accomplished generally by the tenth day, but the time varies according to the nature of the tree. The process of boring, as a rule, takes place during the small hours of the morning, when chances of discovery are thereby lessened, since the boring sound can be heard at a considerable distance. During the day the hole is left, and not returned to till the following morning. The Starling is quick to avail himself of

this absence. The bottom of the newly-drilled hole is soon lined with straw, and then there is every likelihood of a fight ensuing at daybreak. The tactics of the Starling are to terrify his adversary. To do this he takes full advantage of his rapid and mobile flight, which the Woodpecker cannot match. At one moment he darts at his enemy, and is away again before he can retaliate, while the next moment he will be pouring out volleys of angry abuse upon his foe. I have witnessed several of these fights, in which the Starling has invariably reaped an easy victory.

The woods are now destitute of bird-voices, save at times for the fitful cooings of the Ring Doves. The Nightjars, too, are silent. Their monotonous songs ceased as soon as the young were hatched. Nestlings of this species are frequently found here very late in the autumn. One was taken near Sissinghurst on Aug. 10th, and I have on record much later dates than this one. While pairing the Nightjar is very noisy. As soon as twilight begins to fade into dusk the male bird glides noiselessly up to a leaf-ridden and rotten tree-limb and immediately utters his call-note—a loud metallic “twyrrt.” When this has attracted the attention of a female, who utters back a similar note, he commences, though many trees may separate them, his grinding “churr,” resembling the noise of an axe being sharpened on a grindstone. This peculiar song is begun loud—so loud that the dead bough seems to vibrate with the sound. Suddenly the notes become soft and hardly audible, just as if the bird was taking breath for a moment, and then these soft notes are run again into the loud ones. This “churring” song, always marked at regular intervals by the soft bars, lasts at the most for two minutes. Then a short period of silence elapses before another “grind” takes place. And in this still silence one can almost picture to oneself the sharpener feeling his axe before putting the finishing touches to it on the grindstone. Besides this song and call, the Nightjar has an alarm-note. It is a strident “twyrrt,” accompanied by a double clap of the wings. A branch, dry and sapless, the bark of which hangs peeled off in long shrunk-up tubes—a white dusty road or a lately felled tree, shorn of its bark and shooting out its naked arms into the blank night—are places they seek by choice. From such points of vantage their large lustrous black eyes can the more readily

detect the white moths that flutter aimlessly amongst the undergrowth, like pieces of delicately-cut muslin falling from a dress-maker's table. The Red Underwing is also a favourite food. On a clear and calm night their "churrings" are loud and frequent. But when a night-wind is sifting through the trees, and grey-lag clouds darken the summer night, the Nightjars seem discomforted: they sit close, hugging the rotten boughs for very comfort, and the purring "churr" is seldom uttered. During the first week in September these birds will leave, not to reappear till the middle of next May.

Meanwhile the year passes.

NOTES AND QUERIES.

Acreage of the principal Zoological Gardens.—

Most of the large cities of Europe maintain Zoological Gardens, many of which are magnificent in appointment and rich in collections, but all, without exception, are confined to comparatively small areas, and some are much cramped for room.

In Europe.—London, 36 acres; Dublin (?); Bristol, 15 acres; Paris, 10 acres; Amsterdam, 25 acres; The Hague, 20 acres; Antwerp, 20 acres; Berlin, 63 acres; Cologne (?); Dresden (?); Hanover, 10 acres; Frankfort, 25 acres; Breslau (?); Vienna, 30 acres; St. Petersburg (?).

In America.—Philadelphia, 33 acres; Washington, 166 acres; Cincinnati, 36 acres. The Chicago, St. Louis, Pittsburg, Buffalo, and San Francisco gardens are in public parks.

In the East Indies.—Bombay, Madras, Singapore, Hong Kong.

The New York Zoological Society (incorporated by the Legislature in 1895) is taking steps to carry out a scheme for the formation of a large zoological park of not less than 300 acres in extent, the chief feature of which will be to reproduce natural conditions. The choice of locality lies between one of the four larger parks situated north of the Harlem River, viz. Crotona, Van Cortlandt, Pelham, and Bronx. It is proposed that the larger northern animals shall be shown "in free range," the tropical animals in suitable buildings and enclosures; the marine animals on the shore-line by means of tidal ponds. An influential committee has been formed for the purpose of considering and, if possible, carrying out the scheme.

MAMMALIA.

Squirrel with dark tail in August.—On August 2nd, while I was admiring the graceful movements of a Squirrel on one of the tall trees in Ashburnham Park, another of these animals appeared, and as I remained

perfectly quiet they allowed me to watch them for some time through a pair of binoculars. The second Squirrel was particularly interesting in the fact that it had a rich *brown* tail. I never before saw one of these animals with a dark tail in August.—W. RUSKIN BUTTERFIELD (St. Leonards-on-Sea).

Squirrels and Strawberries.—With reference to the correspondence on the carnivorous propensities of the Squirrel, I may state that in my experience they are practically omnivorous. I have several times seen them devouring young birds, but this summer a new phase in their character appeared. At Sheriff Hutton Park, near York, where they are encouraged, and have become very tame, such heavy toll was levied by them upon the strawberries that Mr. Coates was compelled to give orders to his gardeners that retribution was to be meted out to *Sciurus vulgaris*.—OXLEY GRABHAM (Flaxton, York).

Whiskered Bat near York.—A specimen of this Bat was brought to me by a boy who had knocked it down here the other evening. *Vespertilio mystacinus* is very local in the county, and its occurrence is worthy of record.—OXLEY GRABHAM (Flaxton, York).

Whiskered Bat in Co. Fermanagh.—A specimen of the Whiskered Bat (*Vespertilio mystacinus*, Leisler), was captured here in June last by a friend of mine. It flew into his room one evening, and after a long chase he secured it.—CHARLES LANGHAM (Tempo Manor, Co. Fermanagh).

BIRDS.

Food of the Great Titmouse.—Mr. J. Whitaker, in the most recent issue of 'The Zoologist,' has directed attention to the Great Tit's capacity for devastating rows of green peas, and I, to my cost, in a trifling degree, can give his observations the fullest corroboration. To such an extent did the species hereabouts during the summers of 1892 and 1893 take toll of this very desirable garden produce, that for the last three years I have discontinued growing it. I observe that neither in the fourth edition of Yarrell, nor in Seebohm's 'British Birds' is there any reference to the Great Tit's exceedingly marked partiality for this form of diet, and the question consequently arises, Is the taste one of comparatively recent development? The fact, too, that Mr. Whitaker in his lengthy experience has never noticed this mischievous propensity previously to the present summer induces the impression that it is not one of great antiquity.—H. S. DAVENPORT (Skeffington, Leicester).

Blackgame in Merionethshire.—It may interest your readers to know that last year Mr. R. E. Ll. Richards shot a well-grown young Blackcock on Cefn Creian, about four miles from Dolgelley. The last record I have of Blackgame in this neighbourhood is five and twenty years ago, when the

last pair were shot on Drwsynant moor, adjoining Sir Walter Wynn's Llannwchllyn moor. Perhaps some of your readers who reside in Merionethshire would kindly furnish instances of Blackgame in the county.—C. E. M. EDWARDS (Dolserau, Dolgelley).

Birds in the Rhone Valley.—To ornithologists visiting Switzerland, Bex, in the Rhone Valley, may be recommended as a very good centre for the observation of birds. I was chaplain there in July, 1890, and again in July, 1896; and I noted on the latter occasion, and that not in the best month of the year, no fewer than seventy species. What seemed most remarkable to me at Bex was the number of birds about the houses in the town, to be heard and seen without in many cases going outside the doors at all. We sojourned at the Grand Hôtel des Bains, and its kind and energetic proprietor, M. Hieb, took a great interest in our quest of birds, and gave us all the information in his power. There is also a museum close to the hotel which boasts of a good collection of local birds, and is under the direction of M. Borel. Around about the hotel grounds, or within earshot, we observed the following birds among others:—Warblers: Blackcap, Garden Warbler, Bonelli's Warbler, Whitethroat, and Chiffchaff; Common and Black Redstarts, Yellow and Cirl Buntings, Great and Marsh Tits, Chaffinch, Greenfinch, Goldfinch, Serin, Green Woodpecker, Nuthatch, Spotted Flycatcher, and at night the Tawny Owl. In the "Signal" wood just behind, birds abounded, and one afternoon, as my friend James Fitzgerald and myself were wending our way towards the Belvedere, we heard the cry of the Green Woodpecker, followed immediately by a louder and more piercing cry, which I took for that of the Great Black Woodpecker, and in a moment the bird appeared flying towards us; its body seemed as large as that of a chicken, as with rapid beats of the wing and a loud whirring sound it passed over our heads into the forest. In the marshes near the Rhone the Reed Warbler is abundant, but I could not detect the Sedge Warbler, nor, strange to say, the Willow Warbler, most delightful of birds, but which is, I think, rarer on the Continent than with us, whilst Bonelli's Warbler is met with almost everywhere. In going up the Riffel Alp we noticed, as usual, the number of Nutcrackers there, and the first and only Hedgesparrow we met with this year in Switzerland. On July 22nd we ascended to the Hospice of the Great St. Bernard, 8200 ft., and there the only traces of bird-life we could discover were the Meadow Pipit and Black Redstart, close to the Hospice, while high over head an Eagle was sailing—"Aigle noir" we understood from one of the monks; but as we went down by the lake behind the Hospice, a sweet but invisible songster among the rocks delighted us with a bright and charming song in that desolate place: was not this the Rock Thrush? The monks assured us that the Snow Finches came only there in winter, and we certainly saw none, though we had expected to find them

breeding there. About Liddes there were many Ring Ouzels and Wheatears, at an elevation of more than 4000 ft.—(Rev.) CHARLES W. BENSON, LL.D. (Rathmines School, Dublin).

The Scandinavian Pipits.—I was greatly interested in Mr. Aplin's remarks (pp. 300–302) on *Anthus cervinus* and *A. rupestris*, specially in his reference to the figures of the Scandinavian Rock Pipit (*A. rupestris*) in Mr. Booth's 'Rough Notes,' being in his opinion referable to the Alpine or Water Pipit (*A. spipoletta*). The question naturally arises, is the latter found in Scandinavia? Recently, in August this year, when at Vadsö on the Varanger Fjord, for the eclipse of the sun on August 9th, I had opportunities of making short excursions into the surrounding district, and on the 8th visited the whaling station in the Jarfjord, within a few kilos of the Russian frontier. To me this place proved a perfect paradise for Arctic flowers and birds. At the back of the flensing and boiling-down houses there is a considerable track of swampy ground overgrown with dense thickets of low-growing scrub (*Salix glauca* and *S. lanata*); between this and the back of the boiling-sheds were some pits or excavations filled with the odorous refuse of the place. This place literally swarmed with small birds, chiefly Pipits and Wagtails, attracted by innumerable forms of insect-life brought into existence by the unsavoury nature of the locality. In a few minutes I recognised old and young Blue-throats, Lapp Buntings, White Wagtails, Meadow and Red-throated Pipits, and numbers of *Anthus rupestris*. Here also were some Pipits which at the time I unhesitatingly referred to *A. spipoletta*, and entered as such in my note-book, also in that of a lady who was making a list of birds seen during the expedition. Subsequently, on consulting the books I had on board the steamer, I erased *A. spipoletta* as not being found in Scandinavia; at the same time I was by no means satisfied that I had done right. The Pipits in question were almost pure white or buffish underneath, without visible streaks, and a pure slate-grey above with very indistinct centre-feather markings on the back, also a very distinct buff eye-streak. None of us had a gun, so without a skin I am unable to speak positively as to the markings on the outer pair of tail-feathers. The late Mr. Seebohm, in his remarks on *Anthus obscurus* ('British Birds,' vol. ii. p. 247), which he treats with *A. rupestris* as one and the same species, says:—"In addition to the form, the summer plumage of which has already been described, with the streaked sandy-buff under parts, two others occasionally occur: one of these, which I found together with the typical form in the Varanger Fjord, has the ground-colour of the under parts almost pure white, possibly the effect of continuous daylight; the other, which is connected by a series of intermediate examples with the typical form, has the under parts scarcely differing from those of *A. spipoletta*, the streaks being nearly obsolete, and the colour of the breast pale chestnut-buff." The Arctic form of *A. rupestris* may probably be the one

figured by Mr. Booth. At the whaling station I also saw a single example of a large bright yellowish-brown Pipit with a strong bill, which was quite unknown to me. Like all the other small birds, it was excessively tame; so that I was able to watch it, with and without my binocular, at the distance of a few feet. I compared it to a large and very handsome Tree Pipit. Since my return to England I have identified it with the Siberian Pipit (*Anthus gustavi*), rediscovered by Messrs. Seebohm and Harvie-Brown on the Petchora. In this case the range of *Anthus gustavi* extends much further to the eastward than was supposed, and this is the first recorded example within the Norwegian frontier.—JOHN CORDEAUX (Great Cotes House, R.S.O., Lincoln).

Note on *Anthus cervinus*.—After reading my remarks on *A. cervinus* Mr. Coburn was good enough to send his specimen for my inspection. It is paler in colour than any other example I have seen, and I think he was right in stating that it was paler than *A. pratensis*. Whether his bird is an abnormally light-coloured one or not I cannot say; its pale coloration arises from the great development of the light edges of the feathers of the back and wings, and the predominance of the light edges of the feathers of the back over the dark feather-centres. Neither Mr. Coburn nor I can detect in his specimen "the almost black broad central marking of the longest pair of the under tail coverts," said to be a distinguishing mark of this species (*vide* p. 302); although I can find it in my examples of *A. cervinus*. Yet Mr. Coburn's bird was undoubtedly correctly named. The very light colour of the edges of the feathers of the mantle and wings, together with the boldly marked rump and upper tail-coverts, and the absence of the oil-green tinge on the upper parts, all point to this conclusion. Mr. Coburn's bird well exemplifies the character of a "brighter, more brilliant, and more striking bird than *A. pratensis*." To my eye the difference in the arrangement of the markings of the throat and upper breast (I should have added face and sides of the head—plainer and less marked in *A. cervinus*, and the ear-coverts light brown—in my former note) is also apparent, although it is much less so than in some other examples, and Mr. Coburn writes that he did not detect it. Mr. Coburn's bird is probably a bird of the year which had not long completed its autumn moult when it was killed. This would account for the very extensive feather-edgings which in the Pipits gradually wear away as the season advances. It is this abrasion of the feathers which gives such entirely different characters to the plumage of the upper parts in Pipits in autumn and in spring.—O. V. APLIN (Bloxham, Oxon).

Nesting of Summer Migrants.—A plausible reason for the promptness with which the Spotted Flycatcher sets about nesting operations on arriving in our midst may be found, I venture to suggest, in the very fact of its tardy advent. The season is then advancing apace, and domestic cares are not

invariably at an end with the launching forth on the world of the first brood. So recently as ten days ago (August 12th) I had a Spotted Flycatcher's nest in my garden, containing two young ones. It is not to be doubted that the earliest of the vernal migrants are more leisurely in their fulfilment of an inexorable law of nature; but my observations lead me to believe that most of those which put in an appearance from about the middle of April atone for their dilatoriness in migration—as compared, of course, with the first comers—by devoting themselves forthwith to the duties inseparable from the reproduction of their species. In this connection it may be of interest to observe that at page 337 of 'The Zoologist' for the year 1885, in 'Notes on the Vertebrate Animals of Leicestershire,' the Curator of the Leicester Museum quotes me as reporting the first egg of the Whinchat in 1884 as found on April 30th, and adds as a comment that he considers "Mr. Davenport must have mistaken it for the Stonechat, upon the nesting of which he is silent." Now the green pastures of High Leicestershire do not exactly commend themselves as breeding haunts to the Stonechat, and I was silent concerning the nesting of this species in my native county for the not wholly inadequate reason that I have only once set eyes on an example within its borders, and that was in the depth of winter. As a mere detail, however, my experience of this species in regions congenial to its requirements is to the effect that the eggs are procurable in March, and the young generally out of the nests by April 30th. Nevertheless, ignoring as altogether deficient in public interest the more personal question of my competence to discriminate between the two species—not the first time by any means that the accuracy of an observation by a field naturalist has been impugned by the *savant* of a museum—I think that Harley's ornithological attainments will scarcely be gainsaid, and this author has given April 12th as, in his experience, the earliest date of the arrival of the Whinchat in Leicestershire. Such being the case, and granting the correctness of my assumption as to the promptitude with which the mid-April migrants as a general rule go to nest, April 30th is not at all an impossible date on which to come across a Whinchat's egg. I should be sorry to assert that there is any very wide margin betwixt the dates of the arrivals of Whinchats and Redstarts, and yet I have the most perfect recollection of a nest containing five eggs belonging to the latter species on a certain May 3rd, some twelve or thirteen years ago. The hole in which the nest was built faced due north, and a driving and prolonged snowstorm at dawn on that date resulted in the nest, eggs, and locality being found altogether abandoned by the parent birds some few hours later. During the recent spring I spent a few weeks in North Wales, and found a Yellow Wagtail's nest containing eggs on May 5th. To my thinking, this question of how soon the various migrants busy themselves with nesting cares after reaching these shores is replete with interest. May I add that I conceive it a mistaken policy to denounce as

improbable or impossible any duly authenticated observation that does not exactly accord with our own preconceived notions concerning the laws of Nature?—H. S. DAVENPORT (Skeffington, Leicester).

The Extinct Philip Island Parrot.—Some of your readers will be interested to know that there is a hitherto unrecorded specimen of the Philip Island Parrot (*Nestor productus*) in a collection of birds belonging to the city of Birmingham, and now kept in the Museum at Aston Hall. As there are only about a dozen specimens of this now extinct bird in existence, any museum may be considered fortunate that possesses one, and I am surprised to find that in an enlightened city like Birmingham such a rarity should have remained for many years unknown, unnamed, and uncared for. These Nestor Parrots, of which the Kaka (*N. meridionalis*) and the Kea (*N. notabilis*) still survive in the unsettled districts of New Zealand, show a considerable resemblance in several points to the birds of prey, and are probably survivals of a primeval race of Parrots that existed before the two families had so widely diverged as at present from some common ancestor; for, just as the Celtic languages lingered long in secluded districts like Cornwall and the Isle of Man, so these early forms of Parrot-life continued, in New Zealand and Philip Island, long after more modern species had superseded them elsewhere.—J. B. WILLIAMS (Hollington, Westfield Road, Birmingham).

[A figure of the Philip Island Parrot (*Nestor productus*), from a specimen in the British Museum, is given by Prof. Newton (Encycl. Brit. 9th ed. art. 'Birds,' p. 735), who remarks:—"The last known to have lived, according to information supplied to the writer by Mr. Gould, was seen by that gentleman in a cage in London about the year 1851. Not much more than a dozen specimens are believed to exist in collections."—ED.]

Note on the Red-backed Shrike.—In a note on the Red-backed Shrike which I communicated to 'The Zoologist' a short time ago (1896, p. 70), I hinted at the possibility of the curious specimen figured by Meyer (Plate No. 43, upper figure) being a male over its first moult. This, I find, it could not be. On February 18th last I saw in the Zoological Gardens two young Shrikes still in a dress resembling the nest-dress. It may actually have been the nest-dress but I do not at present know whether a slight and partial moult takes place in this bird almost immediately after leaving the nest. Some birds wear the actual nest-dress for a very short time only; e.g. the Spotted Flycatcher, and the Pied Flycatcher also, to judge by Hancock's plate and description. On March 30th Mr. J. Young kindly wrote me word that Red-backed Shrikes moulted into adult dress at the first moult, which usually took place in February. On April 1st he wrote that he had, the day before, inspected the two Shrikes referred to above, and found that both of them had moulted

into adult male plumage, but that their breasts were quite white. When I was in town, in the latter part of April, I saw one of these birds, which was in beautifully clear bright adult plumage, and its breast had then acquired some colour, but was less pink than that of wild birds. The keeper told me that the other bird was exactly similar. The one I saw, which was in the small wall-cage at one end of the western aviary, sang a quiet, rather low-toned chant, with many sweet notes interspersed. It *might* have caught some of these notes from its near neighbours. The other bird had not then begun to sing. Meyer's bird remains a puzzle to me.—O. V. APLIN.

Strength of Wing in the Swan.—Every one is familiar with the popular notion that the strength of a Swan is so great that it is able to break a man's leg with a blow of its wing. This I cannot believe, nor did I until lately believe that a human arm might be fractured in this way. Under exceptional circumstances, however, it seems that this might happen, and a case of the kind has been actually reported to have occurred. A writer in the excellent American paper 'Forest and Stream' (May 20th last) states that the first surgical case that he had in the State of Arkansas was setting an arm that had been fractured by a blow from a Swan's wing. The accident occurred on Swan Lake, near Shawnee village plantation, in Mississippi county, in the winter of 1870. The patient, a hunter for the Memphis market, was "fire-hunting" at night, and a band of Swans flew at the light. The man was in a little pirogue, and instinctively threw his arms up to protect his head. The left arm was struck by the wing of one of the birds, and the man sustained a compound fracture of the forearm, both bones being broken. I never heard of a similar case, and should be curious to know whether such an accident has ever come to the knowledge of any reader of these lines. I have had personal experience of the strength of wing in a Wild Swan (*Cygnus ferus*), on going to retrieve one which I had shot at from a gunning punt and which fell winged on a gravelly island. I was severely buffeted with the uninjured wing, but no bones were broken except that of the Swan which the shot had shattered. This no doubt handicapped the bird considerably and prevented it from fully exerting itself. The details of this incident are given in my 'Essays on Sport and Natural History' (1883), pp. 440-449.—J. E. HARTING.

Catching Wild Swans.—Dr. Jón Stefánoson, in a communication to 'The Field' of Nov. 2nd, 1895 (p. 745), has described a curious mode of capturing Swans which he alleges has been practised for centuries in the north-east of Iceland. In the shortening days of autumn, when their moult is completed, the Swans leave the interior of that island for the coast in flocks of about a score, and at this time the dwellers on the coast assemble with their dogs and lie in wait for the exodus. As the flocks approach the men set up all manner of unearthly sounds, "shouting at the top of their

voices, turning round their rattles, knocking stones against stones, inciting their dogs to bark themselves hoarse—in short, behaving like madmen." The young Swans of the flock are so maddled by the noise—"following as it does close upon the deep, unbroken silence of their inland lakes"—that numbers of them fall to the earth as if they were shot, and are despatched. In an editorial note appended to the communication mention is made of the singular fact that this mode of catching Swans appears to have been unknown to other writers on Iceland—as Olafson, Olavius, Faber, Van Troil, Newton, Shepherd, &c. In the issue of Nov. 23rd Mr. Harting mentions other cases of birds being captured when terrified by noises and shouting, but Stefánoson's account has neither been denied nor received confirmation. Mr. Daniel Francis tells me he has never witnessed a Swan-hunt in Iceland answering to the above description, but his brother has some recollection of hearing of such hunts near Eidisvík. An interesting case mentioned by Mr. Harting (*loc. cit.*) refers to the capture by guachos of the Black-necked Swan. It is from Mr. W. H. Hudson's 'Naturalist in La Plata,' and is as follows:—"When the birds are feeding or resting on the grass, two or three men or boys on horseback go quickly to leeward of the flock, and when opposite to it suddenly wheel and charge it at full speed, uttering loud shouts, by which the birds are thrown into such terror that they are incapable of flying, and are quickly despatched." Mr. Harting's concluding remarks are of much interest, and may be here reproduced:—"It would appear that the terrifying effects of the human voice upon birds in flight has been discovered and exercised for their destruction in many distant quarters of the globe. Indeed it seems likely that, in some form or other, this mode of capturing birds is of considerable antiquity, and it would not be difficult perhaps to find allusions to the practice of bird-catching by shouting and throwing sticks amongst the ancient Greeks, the Egyptians, and the Japanese." Can any reader of 'The Zoologist' make allusion to this practice amongst either of the two nations last mentioned?—W. RUSKIN BUTTERFIELD (St. Leonards-on-Sea).

Habits of the Cuckoo in Confinement.—Mr. George Davis, of Gloucester, whose name has once before appeared in 'The Zoologist' as the successful breeder of a cross between *Carduelis spinus* and *Linota cannabina*, possesses a Cuckoo eighteen months old, whose appetite in captivity apparently has developed a singular trait. The owner of the bird is devoted to our wild avifauna, and to Cuckoos especially, having brought up no fewer than forty for his own delectation. Formerly, when at work in the city, with his home in the country, he used to carry backwards and forwards his Cuckoos, so that he might lose no chance of studying them, keeping the birds by his bedside, and rivalling a foster-mother by his diligence in feeding them with meal-worms, whilst this had to last never less than for six weeks or two months before they would peck up for them-

selves. When rearing up his last Cuckoo, a hen bird, he had occasion, whilst cleaning out some cages, to put a nest of live naked nestlings just outside the Cuckoo's cage. The bird at once appeared in a great state of agitation, trying to peck at the nestlings between the wires. Her owner, unable to see the meaning of this, tested the Cuckoo by giving her a nestling, with the result that she munched its head, its neck, and so on, until she reached the claws, when she again took it by its head and swallowed the whole nestling, head foremost, with the legs last vanishing. The same performance is regularly carried out with any small nestling, dead or alive. This Cuckoo, like others of past days, is fond of raw meat, and this though Cuckoos as a family are insectivorous. It is an observed fact that the Cuckoo often haunts the neighbourhood of a nest containing one of its own young, whilst often the nestlings of the builders of the nest once there are no longer even to be found dead; and, again, in nests containing a Cuckoo's egg, the other eggs have been found sucked and destroyed, leaving the Cuckoo's intact, and the old Cuckoo has been seen flying away. Can it be possible that the Cuckoo sometimes destroys nestlings that hustle its own young, by eating the former, or is the trait above recorded merely a strange development analogous to the devouring by hens of their own chickens in captivity, or to the drinking of port by a tame Rook until it is no longer capable of judging on the rookery bench?—W. L. MELLERSH (The Gryphons, Cheltenham).

Hedgesparrow breeding on the Bass Rock.—In the last number (p. 304) Mr. Meiklejohn reports his having found a nest of the Hedgesparrow with four eggs on the Bass Rock on May 16th, and surmises that such a case was previously unrecorded. I may refer him to my paper on "The Isle of May, its Faunal Position and Bird Life," being the President's Address to the Royal Phyl. Society of Edinb., session cxvi. p. 323, under "Hedgesparrow," which species bred there in 1884. From your correspondent's description of the locality of the nest, I would not be surprised to learn it was the same pair of birds he found in 1896—a low face of rock close to and above the old buildings and enclosure.—J. A. HARVIE BROWN (Dunipace, Larbert, N. B.).

Iceland Gull in Co. Sligo.—In my note on this subject (p. 305) there is a mistake in the date of my finding the Iceland Gull. I picked it up on June 5th—not April 5th. The fact of its being found in June was the reason I sent you the note, for though it is rare in adult plumage in this country, I don't think I should have troubled you with the record of it if I had obtained it in the winter. But as Mr. Cordeaux observed one in the Humber district "as late as April 18th," I thought it well to report that I had got one in June. It could not have been shot many days, for the weather then was very hot here.—CHARLES LANGHAM (Tempo Manor, Co. Fermanagh).

Osprey in Sussex.—I had brought to me on Sept. 5th a fine Osprey (*Pandion haliaetus*), an immature male, weight two pounds nine ounces, length twenty-two inches. It was shot close to the military canal which runs from Winchelsea through Pett Level to Cliff Road, about nine miles from Hastings, Sussex. I note the last records from 'The Zoologist' in October and November, 1889. It is in the hands of Mr. Bristow, of St. Leonards, for preservation.—G. W. BRADSHAW (Hastings).

REPTILIA.

Deaths from Snakes and Wild Animals in 1895.—The Government of Madras has just issued the annual report on this subject for 1895. Altogether 1923 persons were killed by wild animals and snakes, of whom 277 were killed by wild animals, and 1646 are attributed to snakes. These returns of deaths from snake bite must be received with caution, for in many cases they are due to poison. Elephants killed, 4; Tigers, 177; Panthers or Leopards, 64; Bears, 12; Wolves, 10; Hyænas, 2; and other animals, 8. The total number of deaths is rather greater than in 1894. Practically the number of deaths from snake bite was the same as in 1894, which would seem to indicate that the removal of prickly pear and noxious vegetation from village sites (which, however, was carried out in 3346 villages only out of the 41,000 in the Presidency) has had no effect in reducing the death rate. The largest number of deaths from snake bite occurred in the districts of Chingleput, North Arcot, South Arcot, Tanjore, Trichinopoly, and Salem, 58 per cent. of the total being recorded as having happened in those districts. The largest number of people killed by wild animals, excluding snakes, was in Ganjam and Vizagapatam, of which 85 are reported from the former, and 73 from the latter, against 47 and 110 reported in 1894. The increase in Ganjam was due to a man-eating Tiger, which is believed to be still at large, although Rs. 500 was offered for his destruction. The decrease in Vizagapatam is stated to be due to the fact that a man-eating Tiger there was killed by Mr. H. D. Taylor, C.S. The greatest mortality amongst cattle caused by Tigers and Panthers was in Malabar and Canara, and also in North Arcot and Coimbatore, more than half occurring in those districts. Wolves are on the increase in Cuddapah and Kurnaol. The amount paid in rewards fell from Rs. 23,217 in 1894 to Rs. 20,822 in the year under review.

FISHES.

Largest Trout caught in English Waters.—The late Greville Fennell, in 'The Field' of May 23rd, 1868, page 400, says:—"I have looked through my note-books and printed collections for the weights of Trout, and I find that Stephen Oliver, the younger, mentions one taken near Great Driffield, in September, 1832, which measured 32 in. in length, 21 in. in girth, and weighed 17 lbs. A notice was sent to the Linnean

Society of a Trout that was caught on Jan. 11th, 1822, in a little stream ten feet wide branching from the Avon, at the back of Castle Street, Salisbury. On being taken out of the water its weight was found to be 25 lbs. Mrs. Powell, at the bottom of whose garden the fish was first discovered, placed it in a pond, where it was fed and lived four months, but had decreased in weight at the time of its death to 21½ lbs. In the neighbourhood of Downton, on Wiltshire Avon, a Trout was caught with the fly by a Mr. Bailey which weighed 14 lbs.; and in a small tributary of the Trent, at Drayton Manor, a fish was taken exceeding in weight 21 lbs. (*vide* 'Zoologist,' 1848)." In the 'Angler's Journal' of Dec. 20th, 1884, the editor remarks:—"The largest English Trout on record is believed to be that from Drayton Park, which weighed 22½ lbs., the skeleton of which was presented to the College of Surgeons"—this fish probably being the same as that last referred to.

Importation of Salmon into London.—The following statistics, furnished by Messrs. William Forbes Stuart & Co., the well-known Salmon factors, show the enormous amount of Salmon received in the metropolis during a single week of last month, and, for the purpose of comparison, the figures are given for the corresponding week of last year:—

1895.			BOXES.	1896.			BOXES.
Monday,	July 22	.	648	Monday,	July 20	.	404
Tuesday,	" 23	.	309	Tuesday,	" 21	.	284
Wednesday,	" 24	.	437	Wednesday,	" 22	.	412
Thursday,	" 25	.	567	Thursday,	" 23	.	352
Friday,	" 26	.	604	Friday,	" 24	.	397
Saturday,	" 27	.	842	Saturday,	" 25	.	410
			2907				2259
Scotch	.	.	2034	Scotch	.	.	1568
Irish	.	.	617	Irish	.	.	553
English	.	.	165	English	.	.	71
Berwick	.	.	90	Berwick	.	.	67
Norway	.	.	—	Norway	.	.	—
Sweden	.	.	—	Sweden	.	.	—
Dutch	.	.	1	Dutch	.	.	—
			2907				2259

From this table it will be seen that during the week ending July 27th there was an increase of 648 in the number of boxes received.

INSECTS.

Curious Variety of the "Red Admiral."—A rather curious specimen of the "Red Admiral" butterfly (*Vanessa atalanta*) was shown to me by a friend, who had the specimen in his collection. If I remember rightly, it was caught not long ago in the New Forest. The red markings on the wings, instead of being of the normal colour, were pale buff. Never having seen such a variety before, I thought it might be worth recording.—C. B. HORSBROUGH (4, Richmond Hill, Bath).

